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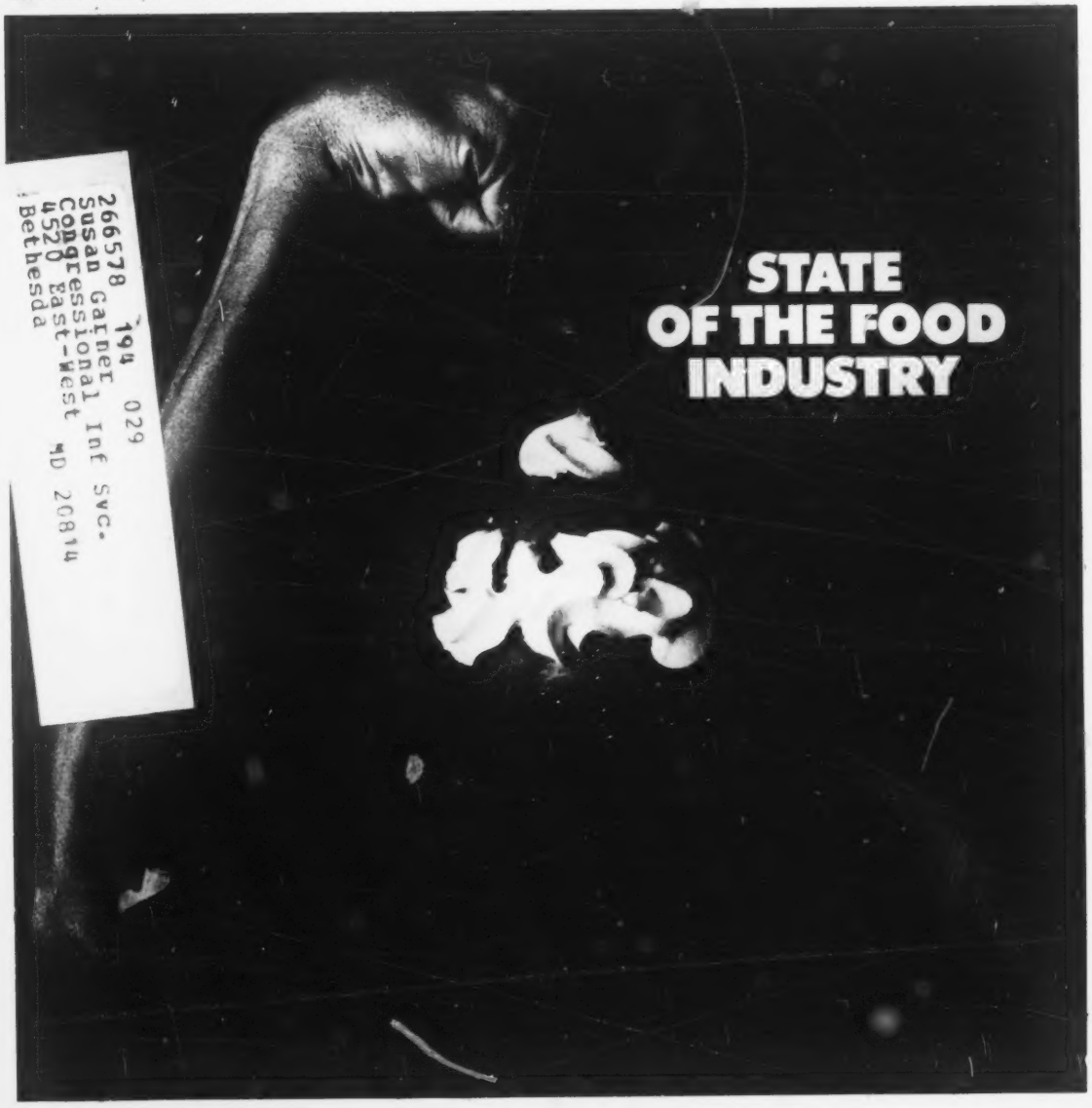

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FOOD ENGINEERING

COVER STORY

The food industry has had another strong performance year. Much of the whirlwind of business activity has been centered around the increasing strength and popularity of brand names.

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FOOD ENGINEERING® (ISSN 0193-323X) June 1989, Vol. 61, No. 6. Published monthly by Chilton Company, Chilton Way, Radnor, PA 19089 (Telephone 215/964-4000). Chilton Co., one of the ABC Publishing Companies, a part of Capital Cities/ABC Inc., New York, NY. Second Class Postage Paid at Wayne, PA 19087 and additional mailing offices. Title registered in U.S. Patent Office ™Chilton Company, 1989. All rights reserved.

POSTMASTER: Send form 3579 to Food Engineering, Post Office Box Number 2035, Radnor, PA 19089.

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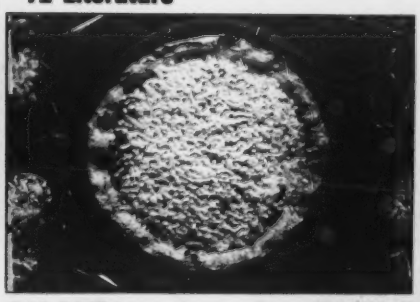

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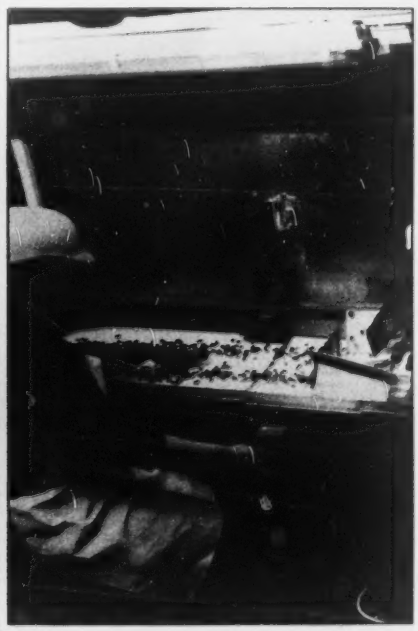

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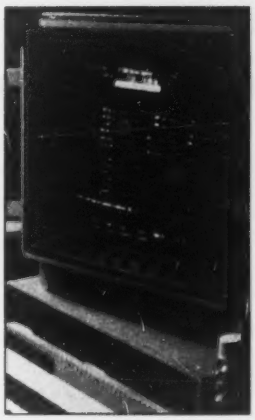

Special Emphasis

ANALYTICAL INSTRUMENTATION

Advanced and automated analytical instruments are making work in the lab easier. And more of these instruments are moving closer to the process – on-line or at-line.

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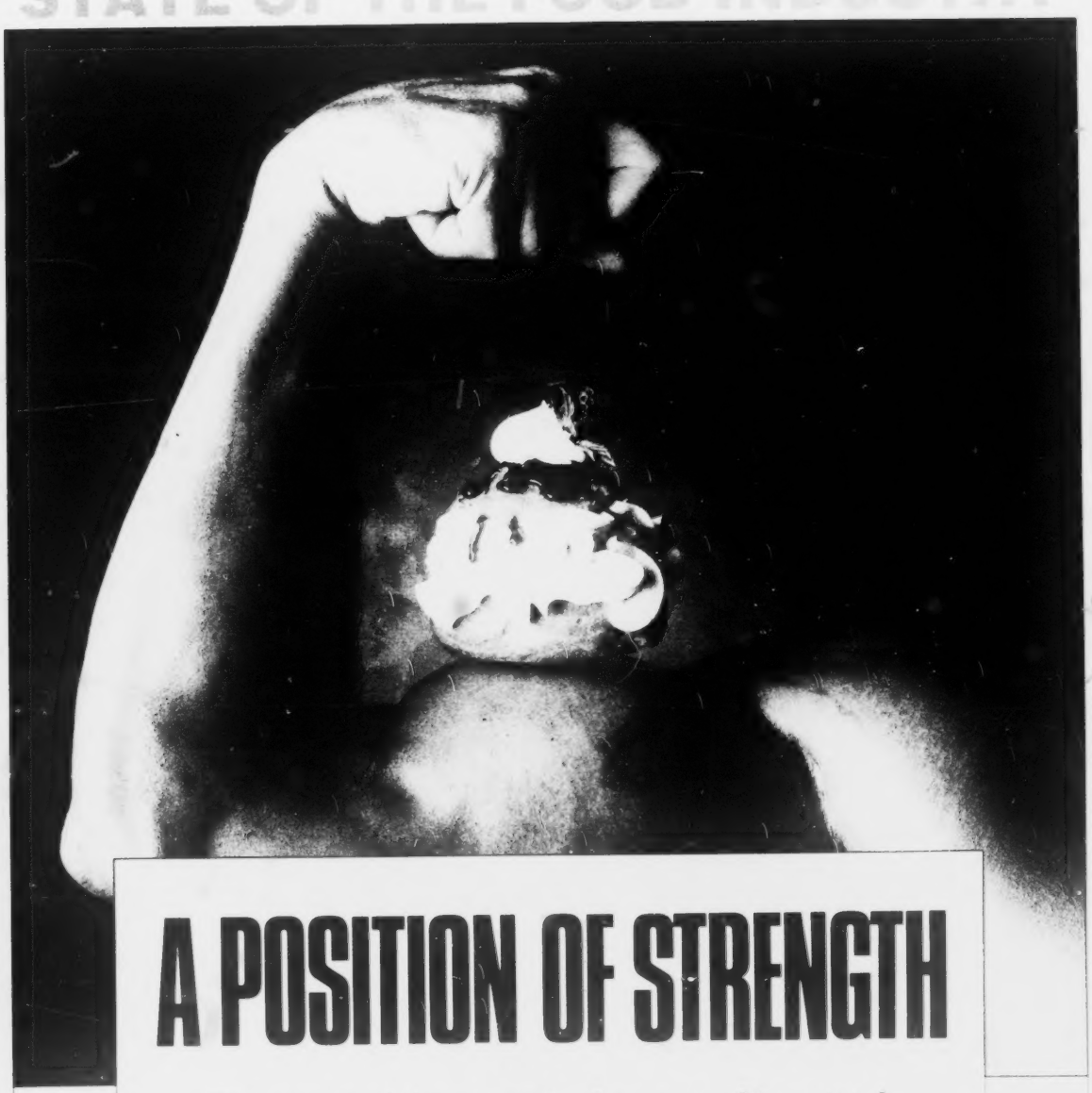


A POSITION OF STRENGTH

The name of the game is the name. Since total volume of food sold rises only one percent each year, capturing that one point is often the result of increasing the strength of a brand name.

Joyce Fassl, Managing Editor; Charles E. Morris, Midwest Editor; Ann E. Przybyla, Senior Editor; Patricia M. Dillon, Senior Associate Editor; Linda K. Freeman, Contributing Editor.

STATE OF THE FOOD INDUSTRY

The food industry has had another strong performance year. Once again, much of the whirlwind of business activity has been centered in brand names: the drive to acquire them, keep them or make them grow.

The question being raised by food and beverage industry watchers is: "How is the industry going to do when faced with an economy that is slowing down, an inflation rate on the rise, and an anticipated recession in 1990?" The consensus seems to be: "Very well, indeed."

Brand strength the key

It seems overly simplistic to say "the name of the game is the name," but it's true. In today's highly competitive marketplace for food and beverage products, where the total volume of food sold in the U.S. rises in the range of a mere one percent a year, capturing a part of that one percentage point is the driving force for much of the activity in the industry.

Fueling that drive over the past several years has been the whirlwind of activity surrounding the moves to acquire brand names, and the market strength that goes along with them. The result of all of that activity is an strong industry, well prepared to face an economy where the dreaded "I" word – inflation – has reared its ugly head. The other hated word – recession – is also being given a lot of play, and the strength of the industry, much of which is based in brand identification, will allow it to weather a recessionary storm and an economic slowdown far better than other segments of the economy.

The industry has merged and acquired itself into a lean, productive entity. Consolidation and streamlining has given rise to a food industry better able to cope with difficult economic times than ever before.

Food expenditure index
(Food away from home)
1984 = 100

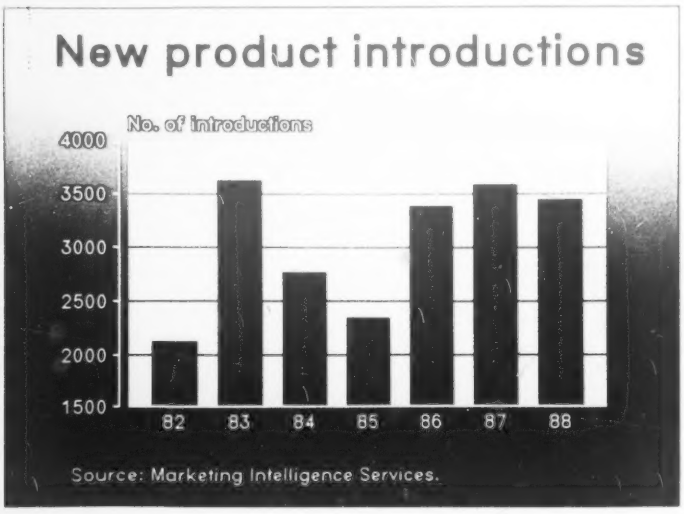
1985	100.4
1986	104.6
1987	109.0
1988	111.3

Food expenditure index
(Food at home)
1984 = 100

1985	104.3
1986	107.0
1987	105.8
1988	106.4

(Note: Expenditures are for food only. Does not include non-foods, alcoholic beverages, etc.)

Source: The Food Institute



Strong stocks

The knowledge that people can put off the acquisition of other items, such as cars, boats, second homes, etc., but cannot put off the purchase of food, makes food companies one of the last to suffer from an inflationary economy. Says one analyst: "Food stocks have shown an ability to retain a good performance record, even when times are tough."

A consensus among stock analysts is that food industry stocks are still under valued, making them a good investment. This makes 1989, according to *Value Line Investment Survey*, published by Value Line, New York, NY, the ninth year in a row that food processing stocks will outperform the market averages. Many of the stocks that the analysts feel will perform well are those with the strongest brand identification: Borden, General Mills, Hershey, Heinz, and others.

Heinz, says one analyst, provides a perfect example of why food stocks are a good investment. Heinz has had consistently good earning results for more than 20 years.

Fiscal year 1989 is expected to be the *twenty-fifth* year in a row that the company's earnings have increased. This is an example of a food company that has survived past difficult economic times and is positioned, due to the ownership of not only the Heinz brand name, but of *Weight Watchers*, *Ore-Ida*, *Star-Kist* (which holds a 40 percent share of the domestic tuna market), *9-Lives*, and others, for double-digit earnings potential even if the economy gets rocky. Heinz now holds 57 percent of the ketchup market in U.S. supermarkets as well as 70 percent of what is sold to restaurants. The result: a profit margin of 21 percent, one of the highest of any U.S. food product.

Stock analysts admit it is difficult to understand the lack of perception of the value of food stocks. Until food stock prices are valued at a rate commensurate with their performance, they will continue to be an excellent investment and will be the catalyst for further takeover bids.

Mergers & acquisitions

The undervaluing of food stocks combined with the drive for brand name acquisition fueled the merger and acquisition in the food and beverage industry in 1988, some of it spilling over into 1989 with the completion of the Kohlberg Kravis Roberts leveraged buyout of RJR Nabisco for $25 billion.

The food industry can be likened to an athletic season – each year a new record falls. The RJR acquisition set a new record as the biggest deal in history, surpassing the $13 billion Philip Morris buyout of Kraft Inc.

All of the acquisitions taking place over the last year, however, weren't billion-dollar events. Many acquisitions were small or medium-sized deals, but each added strength to the acquiring company, either in the area of marketing, distribution or processing. It remains easier, and more cost efficient, to buy market share, or buy a brand name, rather than building it from the ground up.

In all, there were 652 food industry-related mergers and acquisitions in 1988 according to the Food Institute, Fair Lawn, NJ. (See accompanying chart.) Although this was 8.8 percent above the number of transactions recorded in 1987, it is less than the number of transactions in 1985 and 1986.

How long will it last?

Watching the activity over the past several years, with the size of the transactions growing by quantum leaps, the question arises: "How long can merger and acquisition activity last?"

"Who is left?" says Lewis Barton, president of SIGMA Quality Foods Division of Sugar Foods Corporation, whose company SIGMA Quality Foods Corporation was purchased early this year. Barton feels that "there will continue to be a considerable amount of activity, but not at the levels we have seen." Frank Panyko, vice president of The Food Institute and an industry expert on food industry mergers and acquisitions feels the same way. "I don't think we are going to see anything quite as large as the RJR deal again. However, our impression of the mega deal changes every six months."

A function of the economy

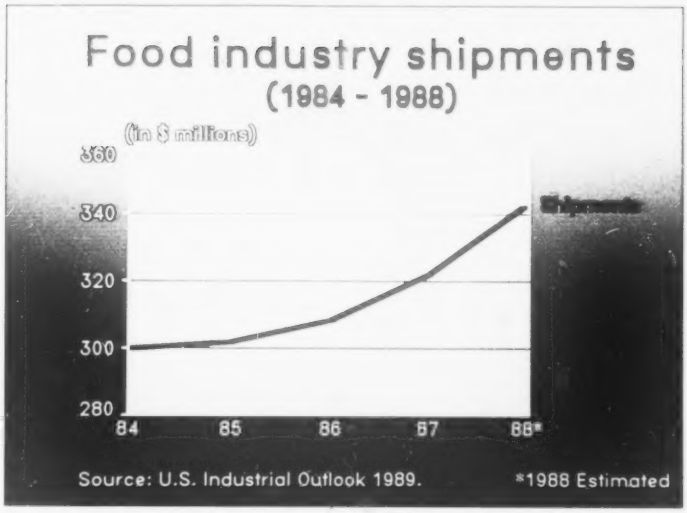
"Essentially, mergers and acquisitions are a function of the economy," says Panyko. "Any economic downturn is going to have a negative impact on this activity because prices are high – companies are going for a premium price, interest rates are high, so financing is potentially risky." Potential buyers become a little more cautious if faced with the threat of a recession. However, Panyko points out, a recession has been threatened before, but has yet to be realized.

"As long as the deals work and the track record is good," says Panyko, "there is not an overwhelming need for caution. There is always a certain amount of caution involved in any of these deals, that is why preliminary studies are done, no matter who is borrowing the money." Pending anything that shows up in the lender's own studies, there is no specific need for caution. "Once the macro-economic picture looks good," says Panyko, "then the deal is set.

"Mergers and acquisitions will continue, however," Panyko continues, "because they are getting very high rates of return." There is caution, he says, "but no more so than with any other investment which will yield double digit rates."

Along with a slower economy, another factor seen as possibly putting a brake on merger and acquisition activity would be if the Congress were to take some type of action which would make the financial rewards less attractive. One possible action mentioned has been a Congressional move to limit interest payment deduction, but nothing definitive has happened to date.

As one industry observer put it: "The ac-



Grocery store price index (1982/84 = 100)	
1984	103.0
1985	105.0
1986	107.5
1987	112.0
1988	116.7

Eating and drinking place price index (1982/84 = 100)	
1984	104.0
1985	108.0
1986	112.3
1987	116.6
1988	121.3

Source: The Food Institute

tivity of the mergers has been carefully positioned so as to preempt any Justice Department action by virtue of compatibility rather than competitiveness. When you study the Kraft/General Foods merger, the beauty of the strategy was that the lines merged."

Some side effects of M&A activity

The effects of some mergers really only begin when the takeover takes place. The wave of activity that has taken place making the deal happen, widens with a rippling effect as portions of the newly-merged identity are sold off to pay some of the outstanding debt. This is not true in all cases, but it is a common occurrence.

Some economists looking at an economic slowdown and a threatened recession see this as a possible problem in the future. They reason that if a recession were to occur, this could endanger the cash flows of some of these companies if it became impossible to sell parts of the newly-formed company to pay off debts.

Other problems on the horizon

A storm is rising in the supermarket industry which will have direct effect on today's food manufacturers. Just as the food and beverage industry has consolidated itself for strength and marketing clout, so, too, has the supermarket industry. Today's grocery chains are using that clout to decide what will and will not appear on shelves and in freezer cases, and even charging, and getting, slotting fees, or fees paid by the manufacturer to the grocery store to have its product placed in the store.

Along with the slotting fees manufacturers may also find themselves being asked to pay another fee for the supermarket to keep the product on the shelf for a specific period of time, and still another fee for removing products that remain unsold. Grocery chains are also requesting additional promotional support for in-store promotion of specific items, coop advertising monies, and more couponing by manufacturers.

All of this, of course, adds to the cost of doing business. It is a cost borne more easily by large companies with established brands than the smaller companies seeking to get their new products on the shelf. No longer are grocery retailers willing to take a chance with an untried product without sharing the risk. The profit margin in the retail grocery store is a slim one and special fees offer the retailer some form of protection from a significant loss if a new product fails in the marketplace.

"Slotting fees," says Richard Lawrence, president of Marketing Intelligence Service (MIS), Naples, NY, "are the distributors' answer to what is a very real problem. Clearly with 6,000 new products, 13,500 SKUs each year, there isn't room on the shelves for all of these things. The store is not elastic and grocers have to find some way of managing that inventory and minimizing what the distributors see as the high risk of new products." After all, says Lawrence, "they don't want a loser on their shelf when they could have a winner."

It used to be the manufacturers "called the shots." Today, the grocery chains are asking, and receiving, fees to help them reduce their risk. "Slotting fees will be around as long as there isn't a better way for manufacturers and distributors to work together," says Lawrence. "If manufacturers come up with products that are demonstrably going to help the distributor improve his business, then perhaps slotting fees will go away."

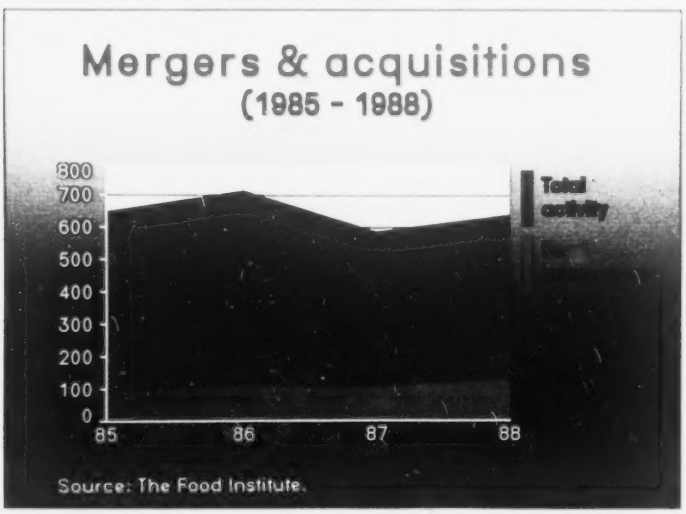
Pricing problems

Another move afoot by some grocery chains is to institute a policy of country-wide pricing. If a chain can charge a uniform price

Producer price index for finished consumer foods (1982 = 100)

1984	105.4
1985	104.6
1986	107.3
1987	109.5
1988	112.6*

*Preliminary figure
Source: The Food Institute



in all of its stores for the same product, the retailers reason, they can make maximum use of their promotional dollars. Manufacturers have traditionally charged different prices in different regions for the same products, a practice which, the manufacturers argue, is vital to the overall effectiveness of their marketing strategy.

This is an argument that is just starting, but will continue to be heard in the industry. Retail grocers are becoming increasingly militant in their efforts to have manufacturers share their risk in stocking the thousands of new products that fight for shelf space each year. Retail grocers used to endure this risk themselves...but they're not willing to do it any more.

All of these fees effect the profitability of a product line. How the food and beverage industry responds remains to be seem. There is clout on both sides. It will be interesting to see who throws down the next gauntlet, and what the reaction will be.

Are we becoming boring?

Uniform pricing, slotting fees, product removal fees—all are a result of the fact that there are just too many products to fit in today's supermarkets. In 1988, according to MIS figures, 3,443 new products were introduced, down from 3,582 in 1987. These figures are not the surprising ones. The figure that amazes the most is that 71 percent of the new products introduced, according to MIS, are line extensions. Another 2.6 percent are brand extensions. Only slightly over one-quarter of new products introduced, or 26.3 percent were actually new brands.

Why so few new brands? "Because product line extensions mean a lesser risk to the manufacturer," says Lawrence, MIS president. "It is less risky because they are trading on an established name. If you have an established name with considerable consumer equity, that provides an established platform from which you can launch new products."

In light of the size of the financial transactions that have taken place within the industry the last several years, and looking ahead to an uncertain economic future, it is understandable that manufacturers are going to take the course that offers the least amount of risk. But what will the long-term effects of this be? How many extensions can you come up with before you dilute the sellability of the product? And how long will consumers buy the same "old" product with a "new" taste?

This, to a certain extent, opens the door for smaller companies who have traditionally tended to be more innovative. But the smaller companies are having trouble getting onto grocery store shelves.

Compounding this problem is the fact that people are eating out more. "The distributors," says Lawrence, "are very aware of people eating out more. We need new products which help them compete with food away from home."

The challenge

This, then, becomes a continuing challenge to the food and beverage industry: to develop new products that will pull the consumers back into the grocery stores and take back a portion of what is spent on food-away-from-home. At the same time, grocery stores must be prepared to handle the items. Says Lawrence: "New departments for fast food items, all of them hand-held, microwaveable products, snacks—products aimed at that market." It is both a manufacturing and a retailing challenge.

What follows is a segment-by-segment analysis of the food industry encompassing both past performance and looking at what lies ahead.

Read on

The challenge facing the food industry will be to keep its position of strength in a difficult economic year, and into 1990, when a whole new set of economic concerns are forecast.

Year	Disposable Personal Income	Food Expenditures	Percent
1966	$ 525.9	109.0	20.7
1976	1252.6	236.2	18.8
1982	2261.4	398.8	17.6
1988*	3473.0	551.9	15.8

*Preliminary

Source: Bureau of Economic Analysis, U.S. Department of Commerce.

Wholesale grocers' sales
(in billions)

1985	$216.1
1986	221.9
1987	222.4
1988	240.6

Source: Census Bureau

Farm price index
(1977 = 100)

1984	142.0
1985	128.0
1986	123.0
1987	127.0
1988	138.0

Source: Dept. of Agriculture

STATE OF THE FOOD INDUSTRY
SNACK FOODS

According to Al Rickard, director of communications for the Snack Food Association, Alexandria, VA, salted snack and nut retail sales jumped 4 percent in 1988, while value of snacks was up 2 percent last year. The association predicts the total snack market to be worth $8 billion.

Business Trend Analysts (BTA), Commack, NY, says that the salted snack market is expected to reach $5.7 billion next year, up from $4 billion in 1984. Much of this growth is attributed to the success of microwave popcorn. Five years ago, unpopped popcorn accounted for about 3 percent of the market, but now represents about 7.6 percent of the market. Chips, especially tortilla, have also grown, mostly due to the popularity of Mexican food. Chips are responsible for 90 percent of the total market.

Establishing regional success means big profits for snack food producers. Most chip manufacturers are small or medium size and do a great deal of regional business, but regional competition among the big guns is heating up. Borden increased its market share by purchasing successful regional firms. While increasing in size, Borden is still far behind the industry giant Frito-Lay, who has about 50 percent of the chip business. Frito-Lay is also looking to increase its regional business and is aiming to take on Procter & Gamble (P&G), who is gaining share of market with the

	1978	1983	1988	1998*
Nuts	$ 1,151	$ 1,499	$ 1,720	$ 2,860
Unpopped popcorn	51	108	406	630
Chips	2,038	3,536	5,037	8,395

*Projection.

Source: U.S. Department of Commerce; Business Trend Analyst, Commack, NY.

Pringles line. According to BTA, Frito-Lay plans to roll-out its own canister-packed varieties of *Doritos*, corn chips, *Lays*, *Ruffles*, and *Chee-tos*. Products packed in canisters have a much longer shelf life and fewer broken chips. Groff's Snack Foods is packaging its products under a nitrogen atmosphere. Because there is less oxygen in the package to react with the peanut oil, the chips stay fresh longer. The company believes this is doubling the shelf life of its product.

P&G is looking forward to producing additional low-fat products if it gains FDA approval of the fat substitute, olestra (see *FE*, June 1987, p. 11). Olestra, a synthetic fat, is not absorbed by the body and is said to have no calories or cholesterol. If olestra is approved, P&G will probably produce a corn chip made with the fat substitute under the Pringles name, says BTA.

According to Marketing Intelligence, Lance Inc., Charlotte, NC, announced that it will reformulate most of its snack line reducing the cholesterol and saturated fat contents in an attempt to to lure consumers who want healthier snacks. Lance says it has reformulated the snacks without ruining the taste by substituting low saturated fat oils like rapeseed (canola) and soybean for high saturated fat oils like coconut and animal oils. These formulation changes will cost more, but the company does not plan to pass the increased price to the consumer.

Sun Snack Foods *Sun Potato Chips* is another one of the first chip products to jump on the canola oil bandwagon. The company claims that these chips, made with 100 percent canola oil as a cooking agent, have 50 percent less saturated fat than regular potato chips.

Corn chips and related products are growing rapidly. During the coming decade these products will probably grow at the rate of 3.3 percent annually, while regular chips are expected to grow 2.6 percent annually.

Popcorn sales have been booming according to BTA—to the tune of 30 percent growth per year since 1984. This rapid growth is driven by the increased use of microwave ovens and the public's desire for a healthy snack. BTA research says that close to 80 percent of U.S. households now have a microwave oven. Microwave popcorn competition is intense and has pushed successful companies to extend their product lines by introducing new flavors. Sour cream, caramel, nacho, and cheddar cheese flavors are among the many choices consumers can make.

At Snaxpo, the annual Snack Food Association meeting held last February in New Orleans, many of the spice and flavor supplier companies exhibited ethnic flavors on potato chips and popcorn. At last year's Snaxpo Cajun and Caribbean were hot items. This year these spices and flavorings were highlighted again, but Italian seasoning was more of a favorite. Some of the Italian-flavored snacks available for tasting were White Cheddar Italian, Alfredo, and Rizotto snack seasoning, a blend of romano and parmesan seasoning with tomato and spice added.

Keeping in line with the ethnic food trend, Keebler last year introduced *Suncheros Tortilla Chips* to challenge the leading brand, *Doritos* from Frito-Lay. Suncheros claim to be the "lightest, crispiest tortilla chips under the sun."

Manufacturers' sales of nuts grew 4 percent in 1988 to $1,720 million, according to BTA. Sales of honey-roasted nuts, the star of the mid-eighties, are now leveling off and have stabilized at close to 20 percent market share of the snack meat nut category. Anheuser-Busch's Eagle Snacks hoped to extend its market share by introducing Maple Roast and Cinnamon Roast flavors for the holiday season last December. These and other gourmet flavors are also making their way into the nut market. Some of the flavors on the market now include Amaretto almonds, mesquite smoked almonds and pecans, cheese, and sour cream and onion.

STATE OF THE FOOD INDUSTRY

DAIRY PRODUCTS

The value of dairy shipments increased an average of 2.1 percent in 1988. The range went from a 5.5 percent increase for condensed and evaporated milk to a decline of 11.5 percent for butter, according to the *1989 U.S. Industrial Outlook*. In general concern about nutrition has resulted in increased consumption of lowfat dairy products and decreased consumption of dairy products higher in fats.

A turnaround in consumption of dairy products occurred during the 1980s. During the late '60s through the mid-'70s, annual 1.5 percent declines were seen in dairy product consumption. But since 1983 consumption of dairy products has risen an average of 2 percent per year. A number of factors have contributed to this turnaround: Retail prices for dairy products have risen less than for most other foods during the '80s; dairy products have been heavily promoted; and higher consumer incomes along with health and nutrition concerns have occurred.

• *Fluid milk:* After a long decline fluid milk consumption is rising modestly. Per capita consumption of fluid milk and cream declined an average of one percent per year from 292.2 pounds in 1965 to 241.9 pounds in 1982, then saw a gain of 3.5 pounds between 1982 and 1986, reports agricultural economists Richard Haidacher and James Blaylock in *National Food Review*, Oct.-Dec. 1988.

Fluid sales of whole milk went from 52.7 percent of the total sales of all milk and cream products (including liquid yogurt and eggnog) to 46.4 percent in 1987, reports the U.S. Department of Agriculture. (Figures for 1988 are not yet available.) At the same time, sales of lowfat and skim fluid milk products rose from 43.1 percent of the total fluid milk product sales in 1984 to 48.7 percent in 1987.

• *Cheese:* Much of the recent increase in total dairy product consumption is due to cheese, reports Haidacher and Blaylock. They point out that per capita consumption, including donations, has grown over 4 percent per year, more than doubling since 1966. Italian-style cheese sales are growing at an especially fast pace. For the three-year period from 1985 to 1987 production of all Italian-style cheeses rose almost ten percent, with mozzarella production rising over 11 percent, reports New York-based Find/SVP in its report, "The Cheese Market." Cheddar cheese remains the most popular cheese in the U.S., though. Cheddar varieties and substitutes made up 46 percent of the value of cheese sold in food stores in 1987.

Dairy products (in millions of dollars)

Value of shipments	1987[1]	1988[1]	1989[2]
Creamy butter	1,636	1,379	1,320
Cheese	11,640	11,945	12,573
Condensed & evap. milk	5,675	5,979	6,313
Ice cream	3,969	3,898	4,055
Fluid milk	16,544	16,662	16,783

[1]Estimated.
[2]Forecast.

Source: U.S. Industrial Outlook 1989—Food, Beverages and Tobacco

The future of the cheese market is expected to remain strong. Find/SVP forecasts that dollar shipments of cheese should continue to rise through 1992 when the market is expected to reach nearly $14.8 billion.

• *Yogurt:* Per capita consumption of yogurt in the U.S. has been steadily rising since 1960. According to Find/SVP's report, "The Yogurt Market," between 1975 and 1988 per capita consumption of yogurt rose more than 119 percent, reaching an estimated 4.63 pounds in 1988.

Projected retail sales of yogurt products (in millions of dollars)

	1989	1993
Cup yogurt products	$ 1,250	$ 1,650
Supermarket sales of frozen yogurt	100	850
Liquid yogurt products	16	55

Source: FIND/SVP's The Yogurt Market

The six leading cup yogurt producers controlled approximately 74 percent of the market in 1988, according to Find/SVP. Nonfat yogurt products have been especially successful, capturing an estimated 11 percent of the market. The use of aspartame as a sweetener for yogurt products was approved by the U.S. Food and Drug Administration during 1988. This led to a number of new introductions.

• *Ice cream and other frozen desserts:* Although ice cream consumption declined between 1987 and 1988, a come back is expected this year according to the *1989 U.S. Industrial Outlook*. This may be due in part the the blizzard of new frozen novelties which were introduced in 1988 (see *FE*, April '89, p.107). But competition in this area is resulting in declining profits as competition pushes prices down.

• *Future:* According to the *1989 U.S. Industrial Outlook*, total constant-dollar shipments will grow 1.3 percent between 1989 and 1993. This growth will be led by sales of frozen novelties and premium ice cream, cheese will follow, and condensed and evaporated milk will hold third place. Fluid milk and butter will lag behind.

"Within the dairy industry, cheese, yogurt, and ice cream and frozen desserts have outpaced overall sales and growth of the dairy industry and they will remain the growth segments through the 1990s," predicts Find/SVP.

STATE OF THE FOOD INDUSTRY
BAKERY PRODUCTS

Oat-bran mania has taken hold of the world of bakery products as more and more manufacturers discover it is the magic ingredient to spur sales. Since the news broke that oat bran may lower cholesterol levels, bakers are adding the ingredient to breads, muffins and even bagels.

Both processors and farmers were caught by surprise by the surge of shoppers seeking the latest fiber fix. The oat crop prior to '88 was purposely cut back due to low demand and much of it was choked by the drought. As a result, oat bran prices have soared as much as 25 percent with only the largest companies able to afford it. Small processors lack the clout to buy the fiber at reasonable prices and at least one small retailer has been affected by the short supplies. Spartan Stores, Inc. has ordered its 300 chains to stop advertising oat bran products in its bakeries.

Although it is too early to tell, oat bran mania may lessen the brunt of an expected slowdown in bakery goods sales. According to the *U.S. Industrial Outlook:* Per capita consumption of bread in 1989 is expected to decrease by 1.2 percent to 45 pounds; variety bread by 2.3 percent to 16.68 pounds per capita; white bread by 0.6 percent to 26.39 pounds. However, per capita consumption of rolls will rise one percent to 17.39 pounds, reports the *Outlook*.

Multi-grain and hearth-baked breads continue to ride the crest of America's health craze. Anything, ranging from whole-wheat to low-calorie bread, that is perceived as being nutritional is a guaranteed best seller in the bakery section. The success of the vitamin-fortified, high fiber breads has spawned the success of sister products, such as bran muffins and bagels.

Product shipments of bakery and related products (in millions of dollars)

Product	1986	1987	1988	1989[1]
All bread	5,295	5,413	5,698	5,907
White pan	2,950	3,014	3,176	3,306
Varieties	2,095	2,144	2,249	2,320
Unspecified kinds	250	255	274	282
Rolls, stuffing, bread crumbs	2,951	3,006	3,128	3,202
Sweet yeast goods	829	837	874	893
Soft cakes	1,519	1,552	1,625	1,674
Pies	344	348	391	414
Pastries	46	50	55	58
Doughnuts	521	524	548	560
Unspecified	1,162	1,186	1,259	1,307
Total	12,667	12,917	13,580	14,016

[1]Estimated by the International Trade Administration.

Source: U.S. Department of Commerce, Bureau of the Census

The cookie and cracker business will also maintain positive growth, although it will slow noticeably. During each of the past five years, the cookie and cracker market grew by eight percent to a total of $7.4 billion in 1988, according to Packaged Facts. This rate is expected to calm down to three percent over the next several years, with sales projected to total $8.5 billion by 1992.

Last year, *Food Engineering* reported the influx of in-store bakeries posed a competitive threat to manufacturers' sales. This growth has tapered off with the numbers of in-store bakeries not increasing significantly from their 1987 numbers of 20,203 locations, according to Ed Weller of the International Deli-Bakery Association. However, as new stores open and old ones are remodeled, the in-store bakery will increase in size. Larger bakeries will allow stores to do the same tasks better and on a larger scale.

Some trends piqued by retail bakeries and bakery boutiques (such as David's Cookies or Mrs. Field's Cookies) have propelled manufacturers to launch new products. Remember the soft cookie boom of a few years ago? Bakery boutiques were the first to find out consumers were willing to pay higher prices for cookies with high quality ingredients. In what could be the birth of another trend, David's Cookies of New York has baked up muffins that are low-cholesterol, sugar-free, and oil-free. At the same time, in-store bakeries have discovered a resurgence in the demand for decorated cakes. The category was virtually ignored by consumers for the last seven years, according to Weller.

The past year will be best be remembered for the flap over tropical oils that persuaded manufacturers, such as Keebler Co., Sunshine Biscuits, Inc., and Pepperidge Farm, Inc., to remove them from their products.

Although imported cookies have become popular, Danish companies have discovered that U.S. consumers do not differentiate among Danish brands. As a result, some of the Danish firms have formed joint advertising ventures, according to Business Trend Analysts, Inc., the Long Island-based market research firm. While adults enjoy European cookies, General Biscuits, Dairy State Foods and Sunshine Biscuits have capitalized on the popularity of dinosaurs with children by releasing dinosaur-shaped cookies.

Bite-sized cookies and crackers have also taken bigger bites of the market. RJR Nabisco has shrunk the nation's most popular cracker into *Ritz Bits* and has released *Quackers*, duck-shaped crackers, to battle Pepperidge Farm's *Goldfish*. Keebler also jumped on the bite-sized wagon with its *Town House Wheat* and *Classic Juniors*.

The $75 million rice cake industry has repositioned itself from health foods to snack foods, reports Business Trend Analysts, adding sales have risen 19 percent from 1987.

STATE OF THE FOOD INDUSTRY

SHELF-STABLE FOODS

Production value of canned fruits, vegetables, and prepared foods grew 8.3 percent to $26.3 billion in 1988, but constant-dollar growth was only 2.5 percent as the popularity of canned fruits and vegetables continues to slide in favor of fresh and frozen, according to the Department of Commerce. The USDA last November projected 1988 per-capita consumption of major canned vegetables at 85 lbs., down from 87.1 in '87, 90.6 in 1980 and 91.4 in 1970. The National Food Processors Association (NFPA) reported 1987-88 canned fruit vegetable shipments up marginally from the '86-87 season, with fruit shipments up 4 percent and vegetable shipments up 1 percent. The only canned-fruit item to decline in shipments was Freestone peaches (down 2 percent). Vegetable performance was mixed, however, NFPA reported. Beets, carrots, corn, and green beans were up, while sweet potatoes, asparagus, tomatoes, lima beans, wax beans, and green peas were down. According to a 1988 Business Trend Analysts (BTA), Commack, NY, report, canned vegetables accounted for 34 percent of processed vegetable sales in 1987, down from 45 percent a decade earlier; canned fruits, while still dominating the processed-fruit market, fell to 57 percent from 64 percent of sales over the same period. Real growth occurred only in the baby food, ethnic food, sauces salad dressings, aseptic foods, and dry soup segments, said Commerce. Salad-dressing shipments gained 2-3 percent along with the growing popularity of salad bars in restaurants and supermarkets. Last year, in fact, 45 percent of supermarkets offered salad bars – up 10 percent from '87. BTA reported processed vegetable-specialties volume at just under $5 billion in '87 and averaging 6 percent annual growth over the past decade, paced by ketchup and other tomato sauces with annual gains averaging 7.6 percent over the same period. Baby-food volume grew 5 percent in spite of negative publicity from the adulterated apple-juice incident. Dry soups now command nearly 30 percent of the soup market, twice the share of a decade earlier. Prepared soups grew overall in '88 to meet consumer demand for microwaveable convenience, says Commerce. Boxed aseptic juices helped reverse consumption decline of canned juices plaguing canners since the '70s, Per-capita consumption of canned juices grew from 7 gallons in '85 to an estimated 8 gallons in '88.

Retail sales of shelf-stable foods in retortable, microwaveable, plastic packaging reached $90 million in 1988, FIND SVP, New York, NY, reported. A December, 1987 study by BTA reports that 32.9 percent of households owning microwave ovens have purchased microwaveable, shelf-stable dinners and vegetables. FIND SVP categorizes these products into three segments: tubs, trays, and pouches. Single-serving tub products such as Dial's *Lunch Bucket* entrees, American Home Products' *Chef Boyardee* pasta entrees, Campbell's *Chunky* soups, and Hormel's *Dinty Moore* and *Hormel* stews, hashes, and casseroles accounted for $75 million. Since consumers see these products as logical extensions of traditional canned foods, tub products could capture 50 percent of the prepared canned-foods market and $3.6 billion in sales by 1994, says FIND SVP. Shelf-stable tray products included Hormel's *Top Shelf* line, and RJR Nabisco's Del Monte *Vegetable Classics*. Products such as these will replace 10 percent of the frozen prepared-foods market within eight years, FIND SVP predicts. Sales of pouched products such as Magic Pantry's *Kretchmar* line and Sandoz Nutrition's *Healthy Recipe* entrees reached about $5 million in '88, said FIND SVP.

Commerce projects 1989 growth of canned goods at 1.2 percent and less than 1 percent through 1993 – nearly all from sauces, dressings, ethnic foods, and aseptic juices.

Trends and forecasts: canned foods[1]
(in millions of dollars except as noted)

Industry data:	1985	1986	1987[2]	1988[3]	1989[4]	annual percent change 1986-87	1987-88	1988-89
Value of shipments	22,712	23,296	24,318	26,338	–	4.4	8.3	–
Value of shipments (1982 $)	20,851	21,266	21,596	22,134	22,400	1.6	2.5	1.2
Total employment (000)	128	127	126	128	128	-0.8	1.6	0.0
Trade data:								
Value of imports	2,062	1,831	1,842	2,038	–	0.6	10.6	–
Value of exports	533	593	664	821	–	12.0	23.6	–

[1]SIC 2032, 2033, 2034, 2035.
[2]Estimated except for exports and imports.
[3]Estimated.
[4]Forecast.

Source: U.S. Department of Commmerce

STATE OF THE FOOD INDUSTRY

BREAKFAST FOODS

America's appetite for cereal has registered healthy sales for the breakfast cereal industry. Sales for cold ready-to-eat cereal have jumped from $5.4 billion to more than $6 billion in 1988, according to SAMI Burke, a service of Arbitron. SAMI also reports hot cereal sales have bubbled from $541 billion to more than $676 billion in 1988.

Per capita consumption of all breakfast cereal gained 1.1 percent in 1988, according to the *U.S. Industrial Outlook*. Bran, multi-grain and high-fiber cereals lead the charge upwards in per capita consumption with an increase of 1.9 percent, the *Outlook* reported. Cold cereal per capita consumption wasn't far behind hot, according to the *Outlook*, at 1.4 percent.

Since the announcement by Northwestern University Medical School, who conducted studies for the Quaker Oats Company, that oat bran is linked to reducing cholesterol, the excitement over oat bran has infiltrated the breakfast cereal aisle. Within the last year, many new cereal introductions involved oat bran in one form or another.

- The Quaker Oats Company, Chicago has launched a cold cereal version of its popular oatmeal: *Quaker Oatmeal Crunch Cereal*.
- Ralston Purina, St. Louis, MO released high fiber *Bran Nuts Cereal*.
- Kellogg's, Battle Creek, MI extended its *Common Sense* line of oat bran cereal with the debut of *Common Sense Oat Bran Frozen Waffles*.
- Ralston Purina contracted with Dunkin' Donuts, Placitas, NM to release *Dunkin' Donuts Cereal* which contains four grain cereal.

Both processors and farmers were caught by surprise by the surge of shoppers seeking the latest fiber fix. Before 1988, demand for oat bran was so low, farmers cut their acreage for oats to levels grown during the Civil War. Lower acreage in combination with the drought and a crop failure put a tremendous dent in oat bran stores. In addition, paperboard costs rose 4.3 percent according to the *Outlook*, igniting packaging costs.

Higher producer costs propelled producers to increase the prices of cold cereal by 7.2 percent and hot cereal by 5.6 percent. These increases were passed on to the consumer with an average six percent raise in retail prices for both cold and hot cereals according to the *Outlook*.

Category	1986	1987	1988	1989[1]
Ready-to-eat	11.36	11.64	11.81	11.94
Corn	3.47	3.54	3.59	3.63
Wheat	3.52	3.61	3.65	3.68
Rice	1.34	1.36	1.38	1.39
All other except baby cereal	3.03	3.13	3.19	3.67
Hot cereal	3.52	3.60	3.65	3.67
Total[2]	**14.81**	**15.17**	**15.38**	**15.52**

[1]Estimated by the International Trade Administration (ITA)
[2]Totals based on production and exports but not imports

Source: U.S. Department of Commerce, Bureau of the Census and the ITA

Industry	1986	1987	1988	1989[1]
Ready-to-serve	4,162	4,524	4,963	5,491
Hot cereals	495	536	579	631
Unspecified items	8.2	9.1	9.1	9.4
Total	4,665	5,069	5,551	6,131

[1]Estimated by International Trade Administration (ITA)

Source: U.S. Department of Commerce, Bureau of the Census and ITA

What could be next after oat bran mania? Studies from Georgetown University have reported serum cholesterol dropping by 20 percent after individuals ingested raw corn bran. Corn bran is lower in calories and is much more plentiful than oat bran, which may make it the next cholesterol elixir.

Moving from cereal to other breakfast foods, the increased concern for cholesterol has fanned the introduction of many egg substitutes that have low or no cholesterol. *EggBeat Low Cholesterol Pure & Natural Egg White Solids* is cholesterol free since it contains no egg yolks and can be mixed with water to replace whole eggs.

Dr. K's Eggs Delite from Dunkel Farms, Oxford, NY, offer eggs that have 40 percent less cholesterol. An interesting twist to the low salt dilemma faced by breakfast eaters who love to season their eggs has been tackled by a West German veterinarian. Dr. George Lauermann fed an herb mix of rosemary, basil, sage and thyme to chickens to yield spiced eggs.

As a final salute to the often conflicting trends in America's eating habits, Marketing Intelligence has reported that a nutritional campaign that was launched a few years ago to encourage breakfast consumption has brought 29 percent more children to the breakfast table than five years ago. However, the little breakfast munchers are eating 34 percent more sugared cereal than children ate five years ago.

STATE OF THE FOOD INDUSTRY

MEAT & POULTRY

Per-capita consumption of poultry surpassed that of beef for the second consecutive year, USDA reported. Americans consumed 7.6 lbs. more poultry (chicken plus turkey) than beef in 1988, and USDA predicts that the gap will nearly double to 14.5 lbs. this year, reflecting consumer health and nutrition concerns.

According to the Commerce Department, the value of red-meat shipments rose 9.1 percent last year to $46.8 billion in current dollars, but only 0.8 percent in constant dollars as red-meat production edged up only 0.4 percent to 38.6 billion lbs. Beef production was static in 1988 at 23.4 billion lbs., USDA reports, and will slide 3 percent this year to 22.75 billion lbs., although beef producers are starting to expand their herds after five years of slow decline. Pork production rose 9 percent to 15.6 billion lbs. in '88 but will slip 1 percent this year to 15.45 billion lbs. Higher feed costs due to last summer's drought plus dry conditions through mid-winter in many areas will weigh heavily on beef pork breeding and culling decisions. Poultry shipments increased 8.9 percent in current dollars (2.6 percent in constant dollars) to $12.6 billion last year, says Commerce. According to USDA, broiler production was up 3 percent to 16 billion lbs. and turkey production up 5 percent to 3.9 billion lbs. Even with higher feed costs, broiler production will rise 5 percent this year and turkey production 4 percent, USDA predicts. Overall, record meat supplies will tend to hold livestock prices steady in 1989 but rising costs associated with processing and marketing beef, pork and poultry in new value-added forms will push retail meat prices up, says USDA.

Processed red-meat shipments totaled $16.2 billion in 1988, Commerce reported. According to an A.C. Nielsen report to the joint AMI FMI meat-marketing conference March 20 in Los Angeles, retail sales of five processed meat segments grew 3 percent, from 2.55 billion lbs. in '87 to 2.62 billion lbs in '88. Breakdown: sliced luncheon meats up 4 percent to $1.95 billion (with 2 percent of the gain attributable to increased volume, 2 percent to higher prices); hot dogs and franks up 2 percent in dollar volume to $1.18 billion, up 3 percent in physical volume to 738 million lbs.; prepackaged bacon down from $1.2 billion to $1.02 billion but weight up 5 percent to 607 million lbs. (with low-salt bacon gaining 30 percent to 33 million lbs., or 5.4 percent of bacon sales); smoked sausage down 1 percent in dollar sales to $702 million as poundage plateaued at 296 million lbs.; breakfast sausage up 3 percent in weight (to 303 million lbs.) while falling 3 percent in dollar sales (to $637 million.)

Several packers (Hormel, John Morrell, Thorn Apple Valley) introduced branded, vacuum-packed or CAP-packaged boneless fresh pork cuts in '88. Branded fresh-beef cuts combining selective breeding with tight trim to cut calories were introduced by Larsen Beef Co., an Ohio packer, and Hughes Supermarkets in Southern California. *Larsen Beef* cuts are packaged in conventional plastic trays with film overwrap and distributed under refrigeration. The gradual trend toward centralized meat cutting continues. "Currently most of our fresh pork and some of our beef comes to us in retail packages," said Byron Allembaugh, chairman and CEO of Ralph's Grocery Co., at the AMI FMI marketing conference. "Central retail cutting and packaging *does* work today with no advance technology other than sanitation and temperature control. No doubt there are still breakthroughs ahead where controlled environment packages can be developed that will maintain the bloom of the product and be acceptable to the consumer."

Most important retail trend for meat packers and processors to recognize: the blurring of the traditional fresh-meat department into the deli, with the need for more convenient, value-added fresh-meat products in three categories, as defined by Willard Bishop Consulting, Ltd. in a 1988 study for AMI: ready-to-cook, ready-to-heat, and ready-to-eat. Most value-added fresh-meat products are now prepared at store level but "we're not interested in creating meat items if you can provide them to us," said Nancy Lazara of Larry's Markets (Seattle) at the annual AMI meeting last October in Las Vegas. "Most of my experience with meat-processing company salesmen has been negative. They have a hard time accepting that declining fresh-meat sales are moving into the...prepared-foods arena."

Long-term outlook, says Commerce: animal growth hormones will boost lean-to-fat ratios, reducing beef and pork fat by as much as 50 percent without sacrificing consumer acceptance and saving producers about $2 billion in feed costs. Per-capita consumption of red meat will fall through 1993, but packers will boost profits through product innovations and by closing inefficient plants. As red-meat packers expand via acquisition into the poultry business and vice versa, by 1993 there will be 25 percent more meat-and-poultry plants than meat-only plants and the number of poultry-only plants will decline. Per-capita consumption of poultry will rise as a percentage of meat consumed from 37 percent last year to 42-44 percent by 1993.

Per-capita consumption of meat and poultry (in pounds)

Year	Beef	Pork	Chicken	Turkey	Veal	Lamb	Total
1985	78.8	62.0	57.6	12.1	1.8	1.4	213.7
1986	78.4	58.6	58.8	13.3	1.9	1.4	212.4
1987	73.4	59.1	62.8	15.1	1.5	1.3	213.2
1988[1]	72.7	63.1	64.1	16.2	1.4	1.4	218.9
1989[2]	69.9	62.7	67.5	16.9	1.4	1.4	219.8

[1]Forecast.
[2]Estimated.

Source: USDA (February 1989)

STATE OF THE FOOD INDUSTRY

CONFECTIONS

The U.S. candy industry is experiencing healthy growth. The 1988 value of total confectionery industry shipments reached an estimated $9.1 billion, or an increase of 5.1 percent over their 1987 value, according to the *1989 U.S. Industrial Outlook*. And the 1988 value of confectionery products produced by all industries was estimated at $10.3 billion.

Total U.S. consumption of candy for 1988 was estimated at approximately 4.6 billion pounds or 2.2 percent over the 1987 level, according to the Industrial Outlook. This would amount to a per capita consumption of all candy of about 18.5 pounds, with chocolate candy per capita consumption estimated to be 9.9 pounds and nonchocolate 7.8 pounds. A larger increase in U.S. production of candy as compared to consumption is due to a significant increase in the quantity of U.S. candy exports during 1988, while the estimated quantity and value of candy imports declined considerable (see chart).

Varied texture and unusual flavors are two of the main trends in confectioneries, says Joan Steuer, president of Los Angeles-based Chocolate Marketing Inc. (CMI). Chocolate and nut blends are popular now – especially ones including hazel and macadamia nuts.

Peanut butter is another exciting part of the current confection market. For example, Leaf, Inc., Bannockburn, IL, recently introduced *Crunchers* candy – bite size candy combining crunchy peanut butter and milk chocolate.

"People want crunch and dual texture," Steuer told *Food Engineering*. "Bite-size or individual portions are also very popular now. This allows people a form of calorie control, convenience and portability."

Traditional items such as caramels and milk chocolate are regaining popularity, while "white" chocolate remains a fad. Part of the problem with "white" chocolate is there is no standard classification, and this makes it difficult to obtain marketing data, explained Steuer. Without available numbers, most major manufacturers are not venturing into this area.

One of the reasons for the decrease in imports is that American candy is currently very popular – it is perceived as fresher and not significantly different enough from European candies to justify the increased cost, says Steuer. "Super-premium European chocolate is purchased mainly for gifts and, therefore, its image receives more attention," she explained. "With this in mind, European manufacturers are concentrating on presentation – with packaging being very important."

In the hard candy area, lollipops are currently in vogue, says Don Davis of Selma, AL-based American Candy Manufacturing Company. Children want sugary products while teenagers prefer tart flavors, he added. The most popular flavor is peppermint with fruit flavors following.

There has been increased interest in natural flavors for candies recently, points out Sandry B. Lowry, marketing specialist for Rudolf Wild of America, Inc., San Mateo, CA. The popular line of *Jelly Belly* Jelly Beans, from Fairfield, CA-based Herman Goelitz Inc., is made with natural flavors whenever possible. Buttered popcorn, orange sherbet, tutti-fruitti, lemon meringue and totally mint are the most recent additions to the line, while very cherry, green apple, coconut, licorice and cinnamon are the most popular varieties.

A number of companies are offering lines of sugar-free candy. For example, Great Expectations Confections, Inc., Chicago, IL, markets *Katherine's Own Sugar Free Confections*. Sweetened with lycasine (or hydrogenated starch hydrolysate), this line includes toffee, chocolate-coated caramel-nut clusters, pecan brittle, and caramels.

Steuer has reservations about the overall appeal of sugar-free candies, noting a price/value problem. "People aren't willing to give up quality without a reduction in calories, after all candy is for indulgence," she explained.

Steuer predicted that candy which combines sweet and salty tastes will be popular in the future. Sweet and salty snacks are currently popular, and it's only a matter of time before these types of candies are seen, she noted.

CONFECTIONERY PRODUCTS
(in billions of dollars)

	1986	1987[1]	1988[2]	1989[3]	percent change 1986-87	1987-88	1988-89
Value of shipments	9,387	9,810	10,309	10,863	4.5	5.1	5.4
Value of shipments (1982$)	7,266	7,517	7,834	8,155	3.5	4.2	4.1
Value of imports	326	315	282	–	-3.4	-10.5	–
Value of exports	237	266	329	–	12.2	23.7	–

[1]Estimated except for imports and exports.
[2]Estimated.
[3]Forecast.

Source: U.S. Industrial Outlook 1989 – Food, Beverage, and Tobacco

STATE OF THE FOOD INDUSTRY

DRESSINGS & SAUCES

In the continuing drama of dressings and sauces, low calorie salad dressings still steal top billing and ethnic sauces are irrepressible co-stars. Retail sales of low and reduced calorie salad dressings shot up by more than 16 percent to total $204 million in 1988, according to SAMI/Burke. The next top rated category was regular calorie salad dressing with sales for pourable dressings increasing by 5.8 percent with $725 million; and spoonable dressing sales rose by 5.2 percent to $412 million in 1988, SAMI reported.

Some of the new low-calorie salad dressings:

- Thomas J. Lipton, Inc., Englewood Cliffs, NJ marketed *Wish Bone Lite Chunky Blue Cheese* and *Lite Classic Dijon Vinaigrette* dressings. Both dressings have less oil.
- Seven Seas, Inc., Glenview, IL, offered *Seven Seas Viva Light Reduced Calorie* dressings. Varieties include: Caesar, Creamy Italian, Herbs & Spices and Red Wine & Vinegar.

The salad dressing market is expected to increase by six to nine percent by 1992, according to SAMI/Burke. Currently, 56 percent of consumers queried by SAMI use a bottle of salad dressing each month; approximately nine percent use four or more bottles per month. Talking about bottles, Kraft promoted its *Kraft Thousand Island Dressing Squeezable* in a 12 ounce plastic squeeze bottle.

Ethnic food sauces, especially Italian sauces, remain as favorites on shoppers' menus. Italian food sauces broke the billion dollar barrier with sales of $105 billion in 1988, up 7.6 percent from 1987. Line extensions seem to make up the bulk of activity within the category. Campbell Soup's *Prego* rolled out *Extra Chunky* in 1988 which followed 1987's *Prego Plus*. Chesebrough-Pond's *Ragu Thick 'N Zesty* replaced *Thick 'N Hearty*. Planned obsolescence is built into much of the new Italian sauces introduced; a new rollout can expect an average lifespan of one year. Together *Ragu* and *Prego* account for approximately three-quarters of the market. Borden's Prince Company holds about ten percent of the market. In 1988 Borden's *Classico* completed its national roll-out while simultaneously becoming the nation's number one premium sauce.

[illegible] (in millions of dollars)

	1987	1988	% change
Mayonnaise	630	660	+4.5
Spoonable dressings	390	412	+5.2
Pourable dressings	683	725	+5.8
Low/reduced calorie dressings	170	204	+16.8
Ketchup	500	512	+2.3
Prepared mustard	186	197	+5.5
Meat sauce	219	228	+3.4
Italian food sauce	971	1.005	+7.6
Liquid gravies, sauces	182	192	+5.0
Dry gravies, seasoning, sauces, and mixes	354	360	+1.8
Barbecue sauce	321	329	+2.6

Source: Selling Areas-Marketing/Burke, a Service of Arbitron, New York, NY.

Mexican sauces is another category that has shown fiery growth, with salsa leading the charge. The Mexican sauce industry has grown at a rate of 15 percent per year to total approximately $300 million last year. Chapala International reported a 231 percent increase in sales when it switched its salsa packaging to glass jars.

The current trend in health and nutrition spills over to dressings and sauces with increased concern over cholesterol. Best Foods, a subsidiary of CPC International, Englewood, NJ has unveiled a cholesterol-free mayonnaise made without egg yolks.

Prepared mustard showed impressive sales gains in 1988 of $197 million, an increase of 5.5 percent over 1987, according to SAMI/Burke. Consumers seem to have discovered that mustard offers flavor with fewer calories than richer sauces. Dijon mustard makes up approximately 20 percent of the mustard market and has aroused considerable interest in the Northeast.

Consumers continue to show their preference for convenience products and ready-made gravies have cashed in as a result. SAMI/Burke reported that liquid gravies and sauces sales have grown to $192 million in 1988, up 5 percent from 1987. Although dry gravies remain a strong contender with sales of $360 million, this has only been an increase of 2 percent over 1987, according to SAMI/Burke.

Another sauce trend that has grown steadily and promises to continue to sizzle is barbecuing. Sales of barbecue sauce has picked up with 1988 sales totaling $329 million, an increase of 2.6 percent from 1987.

Barbecue sauces have evolved from basic tomato-based sauces to extravagant mixtures of spices and sauces. Golden Whisk California Condiments of San Francisco offers its *Super Sauce* that is described as containing "macho mesquite, garlic and power spices."

As America's palete continues to warm up to spicier sauces, H.J. Heinz has shown its readiness to comply with *Old Fashioned* and *Texas Style Hot* varieties to its barbecue sauce line. Barbecue goes international with the introduction of *Roger Hong's Chinese Barbecue Sauce* and *Szechuan Sauce* by Roger Hong Foods, Forest Grove, OR.

Heeding the continual call for convenience, McCormick's has created *MW Mastery Sauce Blend* that includes a special cooking bag from Ziploc and sauce that can be used to cook chicken.

STATE OF THE FOOD INDUSTRY

BEVERAGES

In 1988, the combined value of all U.S. beverage alcohol producers shipments reached $20.9 billion, an increase of 4.1 percent over 1987, according to the Department of Commerce (DOC). Beer industry shipments reached $13.3 billion, just 3.3 percent over 1987. Wine and brandy shipments grew 12.7 percent to $4.1 billion in 1988.

During the first six months of 1988, says DOC, personal consumption expenditures for all alcoholic beverages rose 2.1 percent over 1987. Dollars spent on drinking in public places rose 2.2 percent, while dollars for in home use rose 2.0 percent. Many analysts conclude that shifts in alcoholic beverage taste preference, in response to health and social concerns, may spell difficult times for the industry.

Upscale wines fared better than the $3 jug varieties in 1988. Shipments of premium ($4-7) and superpremium ($7-14) increased 20 percent since 1984 and are giving wine imports a run for their money. While wine sales are up, this does not mean that consumers are drinking more wine, they are just willing to pay more for better quality. On the other hand the wine cooler market cooled down – to a four percent drop in just the first half of '88.

Spirit consumption is estimated by the Commerce Department and others to dip slightly when all the 1988 figures are in. According to *Beverage Industry*, per capita consumption of spirits dropped to 1.6 gallons in 1988 from 1.7 in 1987.

In 1988, the value of bottled and canned soft drinks industry shipments rose 6.9 percent to about $23.5 billion. During the heat wave of 1988, Americans quaffed down 45 gallons per person, says DOC–or close to 1.3 12-oz. bottles a day per person. Coke and Pepsi continue to lead the pack and battle each other for market share, with the war heating up especially between the diet and caffeine-free versions of each brand. According to the *U.S. Industrial Outlook*, the diet cola wars are heating up because many analysts believe the demand for diet soda is growing four to five times faster than traditional sugared sodas.

Juice-added soft drink sales appear to be taking a dive according to DOC. Government reports say that sales of the leading line in the juice-added category went down in the first six months of '88 and the category lost market share. But, Business Trend Analysts (BTA), Commack, NY, predicts good things for juice-added soft drinks. The Long-Island-based firm predicts rapid expansion into the next decade, and the company predicts this segment will account for overall 5 percent of the soft drink market. According to BTA estimated figures, the dollar value of the market for juice-based soft drinks was up 28 percent in 1988 and is worth $1,325.9 million.

Top 10 soft drink brands (1988 share of market)

Brand	% of market
1. Classic Coke	20.1
2. Pepsi-Cola	18.6
3. Diet Coke	8.2
4. Diet Pepsi	5.2
5. Dr Pepper	4.4
6. Sprite	3.6
7. Mountain Dew	3.4
8. 7 Up	3.1
9. Caffeine-free Diet Coke	2.0
10. Royal Crown	1.6

Source: John C. Maxwell, Jr., First Wheat Securities, Richmond, VA

Beverage industry shipments* (in millions of dollars)

	1986	1987[1]	1988[2]	1989[3]
Soft drinks	20,687	21,992	23,500	25,380
Malt beverages	12,678	13,026	13,450	13,962
Wines and brandy	3,163	3,606	4,063	4,660
Distilled liquor	3,504	3,444	3,378	3,322

*Value of all products and services sold
[1]Estimated except for exports and imports
[2]Estimated
[3]Forecast

Source: U.S. Department of Commerce. Estimates and forecasts by International Trade Administration

The fruit beverage industry remains one of the more exciting performers within the overall beverage industry according to BTA. Increasing consumer awareness of health and nutrition has caused per capita consumption of fruit juices to jump up to 8.1 gallons per year.

The hot beverage market peaked in 1976, according to BTA and has been on a downslide ever since. In response to declining coffee sales, hot cocoa and tea are experiencing increased market share. The sweetened cocoa market increased 8 to 11 percent each year in the mid to late '80s, but is projected to level off to about 4 percent per year growth by 1996, according to BTA.

According to the Food Institute, other frozen juices are squeezing out orange juice in the freezer case. The proliferation of what is called "miscellaneous juices," including blends and mixes is leaving less and less room for the traditional frozen concentrated orange juice. According to SAMI/Burke, sales of miscellaneous juices jumped 25.8 percent from $141 million in '87 to $179 million in '88.

STATE OF THE FOOD INDUSTRY

FROZEN FOODS

Frozen dinner and entree sales nearly doubled in just six years – from a wholesale value of $1.8 billion in 1982 to $3.5 billion in 1988 – and will double again to reach $7.5 billion by 1997, according to a May '88 study by Business Trend Analysts (BTA), Commack, NY.

1988 retail sales of 15 frozen meat and vegetable dinner/entree categories selected by *Food Engineering* from a study by Arbitron/SAMI total $4.75 billion, up 4.4 percent from $4.55 billion in 1987 (see table). The Arbitron/SAMI study shows frozen meat and fish *per se* declining in favor of frozen prepared poultry, meat, and fish dinners and entrees (and probably fresh deli dinners and entrees as well), confirming the convenience trend. The dominance of poultry entrees and the growing popularity of seafood entrees confirms the health/nutrition trend seen in fresh meats. Frozen ethnic dinners/entrees were estimated by Business Trend Analysts to represent 17 percent of the overall ethnic food market last year. Italian (excluding pizza) dominates the category with Mexican growing rapidly. BTA and Arbitron/SAMI disagree on Oriental dinners/entrees, however. BTA shows this segment growing, Arbitron/SAMI shows it declining.

Item	1987	1988	% change
Meat	$ 157.9	$ 149.4	-5.4
Fish	975.8	956.9	-1.9
Entrees:			
Poultry	1,058.0	1,100.0	+4.0
Meat	407.6	420.9	+3.3
Fish	128.7	132.9	+3.3
Italian	772.3	834.8	+8.1
Mexican	263.0	278.7	+6.0
Oriental	223.0	216.2	-3.0
Dinners:			
Basic	1,088.0	1,108.8	+1.9
Mexican	97.0	103.8	+7.0
Oriental	47.0	35.6	-24.3
Vegetables:			
Veg. w/butter sauce	76.0	83.0	+9.2
Veg. w/cheese sauce	94.0	105.2	+12.0
Veg. w/cream sauce	26.1	30.0	+14.8
Veg. w/out sauce	95.0	98.3	+3.5
International style	126.0	148.9	+18.2
American style	49.9	55.7	+11.6

Source: Arbitron/SAMI.

More than a third of U.S. households purchased low-calorie frozen entrees in 1988, up from 25 percent in 1986, the Department of Commerce reports. Low-calorie frozen dinners/entrees – such as *Weight Watchers* (Heinz), *Lean Cuisine* (Nestle's Stouffer's), *Le Menu Lightstyle* (Campbell's), *Armour Dinner Classics Lite* (ConAgra) and *Budget Gourmet Slim Selects* (Kraft) – are among the fastest-growing frozen segments with sales growth averaging 24 percent per year over the past five years, says BTA. It projects low-cal dinners and entrees to continue growing at an average rate of 13.6 percent per year.

"Manufacturers hoping to duplicate the success of *Lean Cuisine* or *Le Menu* launched a deluge of new products," BTA reported. This accelerated the battle for scarce freezer space and partly prompted the introduction of retortable, microwaveable, shelf-stable entrees. The majority of frozen dinner and entree offerings are, in fact, dual-ovenable, BTA points out. As reported by *Food Engineering* (April '89), 158 new microwaveable frozen meat, poultry, and seafood entrees and meals were introduced in 1988. Manufacturers have opted to either 1.) reformulate products or redesign packaging for microwaveability, or 2.) simply add microwave cooking instructions to the existing package. "The latter course...has yielded the least positive results in terms of an item's taste and texture...," BTA concluded.

ConAgra introduced a competitive difference with a time/temperature-sensitive "MicroReady Indicator" (which changes color to indicate optimum cook under microwave) to its *Armour Dinner Classics* line. The trend toward microwaveable, single-serving vegetable entrees with an international flavor was exemplified by General Foods' 16-item line of *Birds Eye For One* frozen vegetable and pasta entrees. Packers introduced frozen pizzas to cut a bigger slice of the booming $22-billion pizza market, where pizzerias and home deliveries account for 90 percent of sales.

The DOC estimated 1988 value of frozen-food shipments at $14.6 billion, up 8.3 percent in current dollars but only 3.8 percent in constant dollars from a year earlier. Outlook: Frozen-food shipments will grow by 1.5 percent this year, mainly from low-cal entrees and baked goods. The frozen breakfast category will show "tremendous growth" between 1989 and 1993 to compete with the breakfast entrees of fast-food restaurants, says Commerce. Refrigerated fresh entrees will steal some market share from frozen entrees, and although the long-predicted shakeout of frozen dinners has begun, frozen entrees will continue to be popular because of microwaveable convenience.

STATE OF THE FOOD INDUSTRY

SEAFOOD

Per capita seafood consumption in the U.S. fell in 1988, after five straight years of increases. The National Oceanic and Atmospheric Administration (NOAA) announced that Americans consumed 15.0 pounds of seafood (edible weight) per capita in 1988, down from a record high of 15.4 pounds in 1987.

The decline was attributed to record breaking seafood exports in 1988, combined with lowered imports – especially frozen blocks of fish steaks and fillets – reducing the overall amount of fish available in the U.S., according to NOAA's National Marine Fisheries Service.

Consumption of fresh and frozen fish fell from a record 10 pounds per person in 1987 to 9.6 pounds last year, while both canned and cured seafood held steady during the same period (see chart). The per capita consumption of shrimp rose to a record 2.4 pounds in 1988, up from 2.3 pounds in 1987, reports NOAA. (Shrimp from aquaculture accounted for 22 percent of the world's supply in 1988, according to *Aquaculture Digest*.)

Reacting to the 1988 per capita seafood consumption figures, Lee J. Weddig, executive VP of the National Fisheries Institute (NFI) stated, "Last year was an unusual one for our industry. Those companies exporting seafood enjoyed a record breaking year with U.S. seafood exports reaching $2.2 billion, an incredible 37 percent increase from 1987."

"While the low value of the dollar helped us become the number one seafood exporter, it also had the converse effect of making it more expensive to meet market demands for some imports," he said. "The continued growth of seafood in both domestic and export markets is dependent on the industry's ability to increase supplies at attractive prices."

The major contributor to the 1988 increase of U.S. exports was a jump of 49 percent in purchases by Japan. In 1988 Japan purchased almost $1.6 billion worth of fishery products, according to NFI. The largest volume and value exports are Pacific salmon and Alaskan crab products.

	1987	1988
Frozen seafood	975.8	956.9
Frozen seafood entrees	128.7	132.9
Canned salmon	240.0	231.3
Canned sardines	103.5	101.4
Canned shrimp	68.5	64.4
Canned tuna	1,416.4	1,558.3
Canned miscellaneous	162.5	168.9

Source: SAMI/Burke, Inc.

Between 1982 and 1987 U.S. per capita consumption of seafood increased 25 percent. Much of this increase can be attributed to the positive publicity generated by the health benefits of eating seafood, pointed out Lee Weddig. "Beginning in late 1987, however, these stories began getting pushed out of the headlines by stories about ocean pollution and sensational news stories regarding perceived problems with overall seafood safety," he added.

It is too early to know the economic impact of the Alaskan oil spill on the seafood industry. But to help eradicate public concern over seafood safety, NFI's Board of Directors, at its annual convention in Las Vegas, NV on April 12th, unanimously voted to immediately seek legislation establishing a seafood inspection program. Specific elements sought in the inspection program are: administration by a single federal agency; surveillance of operations consistent with HACCP principles (not continuous inspections); inspection of imports at the same level as domestic products; and regulation of labeling.

	1984	1985	1986	1987	1988
Fresh/frozen	8.5	9.0	9.0	10.0	9.6
Canned	4.9	5.1	5.4	5.1	5.1
Cured	.3	.3	.3	.3	.3
Total	13.7	14.5	14.7	15.4	15.0

Source: National Marine Fisheries Services

"Of all meat protein groups, seafood is the only one which has consistently increased in both price and per capita consumption," stated Weddig in his address at the annual NFI convention. To analyze trends within changes in seafood consumption, NFI commissioned a study from MRCA Information Services to isolate changes for certain populations subcategories. Several of the conclusions reached are:

- Seafood consumption has risen by 25 percent since 1982 mostly due to existing seafood consumers eating more, not because new consumers are beginning to eat seafood.
- At home servings of all seafood increased by 12.2 percent between 1982-82 and 1987-88. Away from home servings over that same period increased by 8.0 percent.
- If population projections are correct and regional trends in seafood consumption continue, 37 percent of the increase in seafood consumption between 1988 and 2010 will occur in the south. The northeast will account for 35 percent; the west, 25 percent; and the midwest, 3 percent.
- Ready-to-eat products which require only heating have grown almost twice as fast as products requiring any other method of preparation.